

MOTOR CONTROL CENTER SCHEDULE												
MCC1												
BUS NUMBER: 50 SERVED FROM: MSG MINIMUM KAIC: 65 REMARKS:			AMPERE RATING: 600 MAIN TYPE: MAIN LUGS ONLY			VOLTAGE (L-L): 480 VOLTAGE (L-N): 277			PHASE: 3 WIRE: 4			
MARK	LOAD DESCRIPTION	CIRCUIT ID	LOAD HORSEPOWER	LOAD KVA	MINIMUM STARTER SIZE	STARTER TYPE	CIRCUIT BREAKER TRIP OR FUSE SIZE	BRANCH CIRCUIT TRIP OR FUSE SIZE	PHASE/NEUTRAL SIZE	CND SIZE	MIN CND SIZE	REMARKS
A1	EXHAUST FAN 4	N	3	3.9	1	FVNR	7 A.	1 3 12	12	3/4		
A1	EXHAUST FAN 4	N	3	3.9	1	FVNR	7 A.	1 3 12	12	3/4		
A1	EXHAUST FAN 4	N	3	3.9	1	FVNR	7 A.	1 3 12	12	3/4		
A1	EXHAUST FAN 4	N	3	3.9	1	FVNR	7 A.	1 3 12	12	3/4		
A6	SPACE ONLY											
B1	SPACE ONLY											
B2	BOILER PUMP 3	M	15	21.8	2	VSD	60 A.	1 3 10	10	3/4		PROVIDE WITH BY-PASS
B3	BOILER NO.1	M	40	43.2	3	FVNR	100 A.	1 3 4	6	1-1/4		
B4	BOILER NO.2	M	40	43.2		FVNR	80 A.	1 3 4	8	1-1/2		
B5	BOILER NO.3	M	40	43.2		FVNR	80 A.	1 3 4	8	1-1/2		
B6	BOILER NO.4	M	25	28.2		FVNR	60 A.	1 3 6	10	1-1/4		
C1	SPACE ONLY											
C2	BOILER PUMP 3	M	15	21.8	2	VSD	60 A.	1 3 10	10	3/4		PROVIDE WITH BYPASS
C3	CONDENSATE PUMP 1	M	2	2.8	1	FVNR	7 A.	1 3 12	12	3/4		
C4	CONDENSATE PUMP 2		2	2.8	1	FVNR	20 A.	1 3 12	12	3/4		
C5	SPARE		2		1	FVNR	7 A.					
C6	CONDENSATE IN-LINE	M	1	1.7	1		20 A.	1 3 12	12	3/4		
C7	SPACE ONLY											
D1	SPACE ONLY											
D2	BOILER PUMP 4	M	15	21.8	2	VSD	60 A.	1 3 10	10	3/4		PROVIDE WITH BY-PASS
D3	SPARE		2		1	FVNR	20 A.	1				
D4	COMB. AIR SUPPLY FAN	C	5	3.6	1	FVNR	20 A.	1 3 12	12	3/4		
D5	COMB. AIR SUPPLY FAN	C	5	3.6	1	FVNR	20 A.	1 3 12	12	3/4		
D6	COMB. AIR SUPPLY FAN	C	5	3.6	1	FVNR	20 A.	1 3 12	12	3/4		
E1	COMB. AIR SUPPLY FAN	C	5	3.6	1	FVNR	20 A.	1 3 12	12	3/4		
E2	BOILER PUMP 5	M	15	21.8	2	VSD	60 A.	1 3 10	10	3/4		PROVIDE WITH BY-PASS
E3	SPACE ONLY											
NEC ART. 220 TOTAL CONNECTED X NEC ART. 220 FEEDER = NEC ART. 220 FEEDER												
LOAD CATEGORY (KW) (KVA) SIZING FACTOR SIZING LOAD (KVA)												
A - HOSPITAL LIGHTING 0.00 0.00 0.00												
B - HOTEL/MOTEL LIGHTING 0.00 0.00 0.00												
C - SPACE COOLING 14.40 1.00 14.40												
D - OTHER HVAC LOADS 0.00 0.00 0.00												
H - SPACE HEATING 0.00 0.00 0.00												
K - KITCHEN APPLIANCES 0.00 0.00 0.00												
L - GENERAL LIGHTING 0.00 0.00 0.00												
M - MISC. CONTINUOUS 249.75 1.25 312.18												
N - MISC. NONCONTINUOUS 15.96 1.00 15.96												
R - RECEPTACLES 0.00 0.00 0.00												
W - WAREHOUSE LIGHTING 0.00 0.00 0.00												
LARGEST MOTOR** 0.00 1.25 0.00												
280.11 342.54												
BALANCED 3 PHASE NEC ART. 220 FEEDER SIZING LOAD (AMPS): + 412.0 A. + RESERVED FUTURE CAPACITY: + 150.0 A. TOTAL NEC ART. 220 FEEDER SIZING LOAD: 562.0 A. MIN. NEC ART. 220 OVERCURRENT PROTECTION: 600 A.												
* NON-CONCIDENTAL LOADS. LARGEST LOAD INCLUDED IN TOTAL. ** LARGEST MOTOR LOAD INCLUDED IN CATEGORIZED LOADS.												

HVAC EQUIPMENT CONNECTION SCHEDULE																																		
CONNECTION DESIGNATION	LOAD DESCRIPTION	VOLTS	PHASE	LOAD INFORMATION					EMERG. POWER REQD.	STARTER INFORMATION					TRIP OR FUSE SIZE	NEMA ENCL. TYPE	DISCONNECT INFORMATION					CIRCUIT INFORMATION					CONNECTION NOTES	CONNECTION DESIGNATION						
				HP	KVA	AMPS	MCA	MOC		FURN. BY	INST. BY	NEMA SIZE	TYPE	STARTER DISCONNECT TYPE			FURN. BY	INST. BY	TYPE	SWITCH RATING	POLE	FUSE OR TRIP RATING	NEMA ENCL. TYPE	CIRCUIT ID	CIRCUIT BRKR TRIP	BRANCH CIRCUIT FUSE/NO. SIZE			CIRCUIT MIN END SIZE	CIRCUIT MAX END SIZE				
21-B1	BOILER NO.1	480	3	40	43.23	52.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	100	3	N/A	1	MCC1-B3	80	3	1	3	4	8	1-1/2	11		21-B1	
21-B2	BOILER NO.2	480	3	40	43.22	52.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	100	3	N/A	1	MCC1-B4	80	3	1	3	4	8	1-1/2	11		21-B2	
21-B3	BOILER NO.3	480	3	40	43.23	52.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	100	3	N/A	1	MCC1-B5	80	3	1	3	4	8	1-1/2	11		21-B3	
21-B4	BOILER NO.4	480	3	25	28.26	34.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	60	3	N/A	1	MCC1-B6	60	3	1	3	6	10	1-1/4	11		21-B4	
21-EF1	EXHAUST FAN 1	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-26	20	1	1	1	12	12	3/4	11, 12		21-EF1
21-EF10	EXHAUST FAN 10	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-36	20	1	1	1	12	12	3/4	11, 12		21-EF10
21-EF11	EXHAUST FAN 11	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-38	20	1	1	1	12	12	3/4	11, 12		21-EF11
21-EF13	EXHAUST FAN 13	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-42	20	1	1	1	12	12	3/4	3, 11, 12		21-EF13
21-EF2	EXHAUST FAN 2	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-28	20	1	1	1	12	12	3/4	11, 12		21-EF2
21-EF3	EXHAUST FAN 3	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-30	20	1	1	1	12	12	3/4	11, 12		21-EF3
21-EF4	EXHAUST FAN 4	480	3	3	3.99	4.8	N/A	N/A	YES	DIV. 16	DIV. 16	1	FVNR	N/A	20	IN MCC	EQ. MFR.	EQ. MFR.	SEE NOTES	30	3	N/A	1	MCC1-A1	20	3	1	3	12	12	3/4	2, 11, 15		21-EF4
21-EF5	EXHAUST FAN 5	480	3	3	3.99	4.8	N/A	N/A	YES	DIV. 16	DIV. 16	1	FVNR	N/A	20	IN MCC	EQ. MFR.	EQ. MFR.	SEE NOTES	30	3	N/A	3R	MCC1-A2	20	3	1	3	12	12	3/4	2, 11, 15		21-EF5
21-EF6	EXHAUST FAN 6	480	3	3	3.99	4.8	N/A	N/A	YES	DIV. 16	DIV. 16	1	FVNR	N/A	20	IN MCC	EQ. MFR.	EQ. MFR.	SEE NOTES	30	3	N/A	3R	MCC1-A3	20	3	1	3	12	12	3/4	2, 11, 15		21-EF6
21-EF7	EXHAUST FAN 7	480	3	3	3.99	4.8	N/A	N/A	YES	DIV. 16	DIV. 16	1	FVNR	N/A	20	IN MCC	EQ. MFR.	EQ. MFR.	SEE NOTES	30	3	N/A	3R	MCC1-A4	20	3	1	3	12	12	3/4	2, 11, 15		21-EF7
21-EF8	EXHAUST FAN 8	120	1	1/4	0.69	5.9	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-32	20	1	1	1	12	12	3/4	11, 12		21-EF8
21-EF9	EXHAUST FAN 9	120	1	1/4	0.69	5.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A	20	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	N/A	N/A	N/A	LB1-34	20	1	1	1	12	12	3/4	11, 12		21-EF9
21-EUH1	ELEC. UNIT HEATER 1	480	3	N/A	5.00	6.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	N/A	N/A	N/A	HB2-27	20	3	1	3	12	12	3/4	2, 11		21-EUH1
21-EUH2	ELEC. UNIT HEATER 2	480	3	??	5.00	6.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	N/A	N/A	N/A	HB2-4	20	3	1	3	12	12	3/4	2, 11		21-EUH2
21-EUH3	ELEC. UNIT HEATER 3	277	1	??	3.00	10.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	N/A	N/A	N/A	HB2-31	20	1	1	1	12	12	3/4	2, 11		21-EUH3
21-EUH4	ELEC. UNIT HEATER 4	277	1	N/A	0.00	10.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	N/A	N/A	N/A	HB2-33	20	1	1	1	12	12	3/4	2, 11		21-EUH4
21-EUH5	ELEC. UNIT HEATER 5	480	3	N/A	5	6	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	3	N/A	N/A	HB2-21	20	3	1	3	12	12	3/4	2, 11		21-EUH5
21-EUH6	ELEC. UNIT HEATER 6	277	1	??	3.00	10.8	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	EQ. MFR.	EQ. MFR.	N/A	N/A	N/A	N/A	1	HB2-39	20	1	1	1	12	12	3/4	2, 11		21-EUH6
21-EUH7	ELEC. UNIT HEATER 7	480	3	N/A	5.00	6.0	N/A	N/A	YES	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	HB2-10	20	1	1	1	12	12	3/4	2, 11		21-EUH7
21-RTU1	ROOF TOP UNIT 1	480	3	??	0.00	0.0	80	90	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	3R	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	HB2-16	90	3	1	3	3	8	1-1/2	2, 10, 11		21-RTU1
21-RTU2	ROOF TOP UNIT 2	480	3	??	0.00	0.0	80	90	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	3R	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	HB2-10	90	3	1	3	3	8	1-1/2	2, 10, 11		21-RTU2
21-SF1	COMB. AIR SUPPLY FAN	480	3	5	3.60	7.6	9.5	17.1	YES	EQ. MFR.	EQ. MFR.	1	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	MCC1-D4	20	3	1	3	12	12	3/4	2, 11		21-SF1
21-SF2	COMB. AIR SUPPLY FAN	480	3	5	3.60	7.5	9.5	17.1	YES	EQ. MFR.	EQ. MFR.	1	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	MCC1-D5	20	3	1	3	12	12	3/4	2, 11		21-SF2
21-SF3	COMB. AIR SUPPLY FAN	480	3	5	3.60	7.5	9.5	17.1	YES	EQ. MFR.	EQ. MFR.	1	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	MCC1-D6	20	3	1	3	12	12	3/4	2, 11		21-SF3
21-SF4	COMB. AIR SUPPLY FAN	480	3	5	3.60	7.5	9.5	17.1	YES	EQ. MFR.	EQ. MFR.	1	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	MCC1-E1	20	3	1	3	12	12	3/4	2, 11		21-SF4
21-SSAH1	AIR HANDLING UNIT 1	208	1	??	0.21	1.0	N/A	N/A	YES	N/A	N/A	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	30	2	N/A	1		20	2	1	2	12	12	3/4	9		21-SSAH1
21-SSAH2	AIR HANDLING UNIT 2	208	1	??	0.21	1.0	N/A	N/A	YES	N/A	N/A	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	30	2	N/A	1		20	2	1	2	12	12	3/4	9		21-SSAH2
21-SSAH3	AIR HANDLING UNIT 3	208	1	??	0.21	1.0	N/A	N/A	YES	N/A	N/A	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	30	2	N/A	1		20	2	1	2	12	12	3/4	9		21-SSAH3
21-SSAH4	AIR HANDLING UNIT 4	208	1	??	0.21	1.0	N/A	N/A	YES	N/A	N/A	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	NON-FUSED SWITCH	30	2	N/A	1		20	2	1	2	12	12	3/4	9		21-SSAH4
21-SSCU3	CONDENSING UNIT 3	208	1	??	0.00	0.0	12	15	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	FUSED SWITCH	30	2	PER NAMEPLATE	3R	LB2-9	20	2	1	2	12	12	3/4	9, 10, 11		21-SSCU3
21-SSCU4	CONDENSING UNIT 4	208	1	??	0.00	0.0	12	15	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	FUSED SWITCH	30	2	PER NAMEPLATE	3R	LB2-13	20	2	1	2	12	12	3/4	9, 10, 11		21-SSCU4
21-SSHP1	HEAT PUMP UNIT 1	208	1	??	0.00	0.0	25	40	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	FUSED SWITCH	60	2	PER NAMEPLATE	3R	LB2-1	40	2	1	2	8	10	1	9, 10, 11		21-SSHP1
21-SSHP2	HEAT PUMP UNIT 2	208	1	??	0.00	0.0	25	40	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A		N/A	DIV. 16	DIV. 16	FUSED SWITCH	60	2	PER NAMEPLATE	3R	LB2-5	40	2	1	2	8	10	1	9, 10, 11		21-SSHP2
21-SSRTU2	ROOF TOP UNIT 2	480	3	??	66.65	80.1	80.2	90.0	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A		N/A	N/A	EQ. MFR.	N/A	N/A	3	3R		90	3	1	3	2	8	2	10, 11		21-SSRTU2	
FS2-1	FAN COIL UNIT 1	480	3	??	3.20	3.8	N/A	N/A	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	2	N/A	N/A	HB2-34	20	3	1	3	12	12	3/4	2, 10, 11		FS2-1
FS2-2	FAN COIL UNIT 3	480	3	??	11.20	13.4	N/A	N/A	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	HB2-40	25	3	1	3	12	10	1	2, 10, 11		FS2-2
VS-3	FAN COIL UNIT 3	480	3	??	3.20	3.8	N/A	N/A	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	HB1-34	20	3	1	3	12	12	3/4	2, 10, 11		VS-3
VS-4	FAN COIL UNIT 4	480	3	??	18.00	21.6	N/A	N/A	YES	EQ. MFR.	EQ. MFR.	N/A	SEE NOTES	N/A	NOTE	N/A	EQ. MFR.	EQ. MFR.	SEE NOTES	N/A	3	N/A	N/A	HB1-40	40	3	1	3	8	10	1-1/4	2, 10, 11		VS-4
1. LOCK BREAKER "ON" 2. DISCONNECT PROVIDED WITH EQUIPMENT 3. CIRCUIT FROM LIGHT SWITCH 4. VERIFY LOCATION WITH MECHANICAL CONTRACTOR 5. VFD PROVIDED IN MOTOR CONTROL CENTER 6. EQUIPPED WITH MOTION SENSORS 7. PROVIDE MOTOR RATED SWITCH 8. PROVIDE NEMA 5-20R RECEPTACLE FOR CORD AND PLUG CONNECTION 9. AIR HANDLER CIRCUIT COMES FROM CONDENSING UNIT. 10. CONTROLLER/STARTER PROVIDED WITH UNIT. 11. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTION TO EQUIPMENT. 12. DISCONNECT AND THERMAL OVERLOAD PROVIDED WITH EQUIPMENT. 13. PROVIDE TOGGLE DISCONNECT SWITCH 14. PROVIDE NEMA 15-50R RECEPTACLE WITH MATCHING CORD AND PLUG. 15. FEED OUT OF PANELS																																		